

Health Economics Unit

Welcome message from Tracy Roberts, Head of Health Economics Unit



For HEU, 2017 got off to a fabulous start, as we hosted the Winter meeting of HESG. The team thoroughly enjoyed the event, even local organisers Phil Kinghorn and Lazaros Andronis, despite the ageing effect on them! Feedback from colleagues, who attended from across the UK, has been extremely complimentary. We wish to pay particular thanks to all who contributed to the excellent plenary session (see inside).

On the research front, we present an overview of the six main research themes that represent HEU's portfolio of projects (page 3), and on page 2, Hareth Al-Janabi and Carol McLoughlin introduce their NIHR funded research, as an example of a project relating to the theme on Carers, families and spillover effects.

HEU's PhD programme continues to thrive and I wish to extend a warm welcome to our four new PhD students Tuba, James, Dawit and Mandana (see below). We congratulate Sam Husbands on the success of her PhD, as well as all of the MSc students who graduated in the December ceremony. Among those graduates was Joel Glynn, from the second cohort of MSc Health Economics and Econometrics students; Joel shares with us his experience of the course and how it has benefited him so far (page 4). Applications for both HEU's MSc programmes (Health Economics and Health Policy & Health Economics and Econometrics) are now open, and you can find more information here: [Health Economics MSc](#)

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What's new in HEU?

HEU is pleased to introduce four new Post Graduate Researchers



James Hall, who is undertaking a Keele University-funded PhD studentship, spending time at both institutions to benefit from health economic expertise at Birmingham and the musculoskeletal research programme at Keele. James' PhD will focus on exploring the issues and challenges of constructing decision models to answer cost-effectiveness questions in the management of musculoskeletal disorders and he will develop decision models of stratified care for back pain and sciatica. James' supervision team are: **Dr Sue Jowett** (lead) with **Dr Raymond Oppong** (Birmingham), and Dr Kika Konstantinou with Dr Reuben Ogollah (Keele).

Dawit Zemedikun, who is also undertaking a joint University of Birmingham and Keele University funded PhD studentship. Dawit's research will explore, quantify and update estimates of the economic burden of back pain in the UK using routine data. Dawit's supervision team are **Professor Tracy Roberts** (lead), **Dr Jesse Kigozi** and Professor Alessandra Guariglia (Birmingham) with Dr Gwenllian Wynne-Jones and Dr Majid Artus (Keele).

The studentships for James and Dawit are part of a long-standing research collaboration between the Universities of Birmingham and Keele.

Mandana Zanganeh, whose PhD research will enhance understanding of global trends in childhood obesity and make cross-country comparisons of the cost-effectiveness of obesity prevention in school-aged children. Mandana will be supervised by the University of Birmingham team of Professor Peymane Adab (lead) and Dr Stacey Bai Li (Public Health) and **Dr Emma Frew**.

Tuba Saygın Avcı, whose PhD is funded by the Turkish Ministry of Education and is on the health economics of smoking cessation interventions for pregnant smokers. Cessation interventions for pregnant smokers have been largely ineffective, and innovation is warranted in order to address the health inequalities agenda. The research will draw on the experience of an innovative intervention in Gloucester as a basis for estimating the cost-effectiveness of this type of smoking cessation intervention. Tuba's supervisors are **Dr Hugh McLeod** (lead), **Dr Louise Jackson** and **Dr Pelham Barton**.

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Implementing the Care Act 2014: Preventing, reducing or delaying needs for care and support in adult social care in England

The Care Act 2014 places a responsibility on Local Authorities to promote people's wellbeing and to prevent, reduce or delay their need for social care. Fundamentally, this involves moving the allocation of funding 'upstream' to help people to build sustainable lifestyles and support arrangements *before* difficulties become too serious.

While Local Authorities have undertaken a range of different initiatives to address this agenda (e.g. promoting 'circles of support' or imaginative use of personal budgets), the range, scope and impact of the various types of intervention are not well understood. This NIHR funded study aims to fill this gap by investigating what activity is being undertaken by Local Authorities and what difference this is making.

The research is being led by Jerry Tew, Professor of Mental Health and Social Work in the School of Social Policy at the University of Birmingham. HEU's **Philip Kinghorn** is a co-applicant on the grant and will lead the health economics elements.

The team will first review the current evidence for interventions that can reduce, prevent or delay the need for social care and map what Local Authorities in England are currently doing. From this, they will identify a series of case study sites to investigate in depth.

In each example, we will examine what is being done that is novel, how this is being implemented, and whether or not this is making a difference to people's lives. We will also compare the financial costs attributable to each initiative and any savings in terms of reduced use of social care and health services. The results will provide both a comprehensive picture of current practice and a more detailed evaluation of the impact and effectiveness of a range of approaches that are now being tried out.



Phil

Techniques to include carer quality of life in economic evaluation

Hareth Al-Janabi and **Carol McLoughlin** are working on this NIHR-funded career development fellowship. The research aims to address methodological challenges in including carer quality of life in economic evaluation. This issue has been brought into sharper focus with recent guidelines, including The US Panel, advocating the inclusion of carer and family outcomes in economic evaluations. Studies are being conducted predominantly in the context of dementia, stroke, and long-term mental illness – areas where caregiving is likely to bring important yet distinct challenges. Over the last year, work has focused on setting up studies to explore two issues: (i) when is carer quality of life most likely to be affected by patient care; and (ii) how do different quality of life measures perform for family carers?

In the first study, Hareth is conducting qualitative work with care professionals and family carers to better understand the way care is delivered in stroke, dementia and mental health and how family carers may be positively and negatively affected. This work will feed in to a Delphi study to identify high priority treatment contexts where carer quality of life effects most need to be evaluated.

In the second study, Carol is conducting survey work with carers from across the UK (identified by NatGen) to explore the validity and responsiveness of different quality of life tools. Later this year she will be conducting think-aloud interviews to explore the acceptability of the measures.



Carol and Hareth

Hareth and Carol are supported by a number of other researchers in Birmingham and elsewhere, including HEU's **Ilias Goranitis**. They are also assisted by an excellent lay panel of family carers, who have been piloting the research techniques and providing useful practical advice. You can read more about the work on the new webpage: www.birmingham.ac.uk/care-econ

Have you heard... ...about our research themes?

Our research themes have emerged from identified areas of excellence; they are supported by significant funding, support significant numbers of staff & students and lead to highly rated publications.

Cardiovascular Disease (theme lead: Dr Sue Jowett)

This research theme covers a broad area of conditions and interventions in both primary and secondary care. This type of work has the potential to have considerable impact on how patients are managed in the future, for example, economic modelling undertaken in conjunction with the Unit has led to a change in guidelines for the detection of hypertension.

Carers, families, and spillover effects (theme lead: Dr Hareth Al-Janabi)

This theme is focused on methods to measure and value family carers' quality of life to enable carer outcomes to be considered in economic evaluation.

Musculoskeletal Disease (theme lead: Dr Sue Jowett)

HEU has a formal contract with the Arthritis Research UK Primary Care Centre at Keele University to develop and support the health economic aspects of all their MSK research. This means that the Unit is involved in studies at the forefront of research in this clinical area.

Public Health (theme lead: Dr Emma Frew)

As well as research focused on using methods to capture wider well-being effects from public health interventions, HEU-led research is providing direct support to local government decision-making.

Well-being and Capability (theme lead: Dr Philip Kinghorn)

Research relating to the well-being and capability theme is not limited to one economic framework, but instead incorporates much methodological research relating to both Welfarist cost-benefit analysis and the capability approach.

Women's Health (theme lead: Professor Tracy Roberts)

Research within HEU relates primarily to sexually transmitted diseases that can affect fertility, and also perinatal reproductive health relating to the mother's health during pregnancy, childbirth or miscarriage and that of the newborn infant. More recently the theme has expanded to include research into treatments for breast cancer.

...about HESG Birmingham?

The HESG Winter 2017 meeting was hosted by HEU from the 4th-6th January 2017. The meeting, held in central Birmingham, was attended by more than 120 delegates, who came together to discuss recent research and developments in health economics. Selected papers on topical work were presented and discussed over 3 days, in 53 sessions. One of the conference highlights was the Conference Plenary Session, in which Professors Judith Smith (HSMC, Birmingham), Matt Sutton (MCH, Manchester), Andrew Street (CHE, York) and Paula Lorgelly (OHE) led a discussion about short to medium-term priorities for the NHS. The next conference will be held in Aberdeen 28th-30th June 2017; we wish the local organising team every success.



Pelham's Pen

A health economics student reaching the end of the MSc course is being interviewed by a consultancy firm. As the interview nears its end, the interviewer asks "What sort of starting salary were you thinking about?"

The student says "Somewhere around £60,000 a year, depending on what other benefits are included."

The interviewer then says "Well what would you say to a package of 7 weeks holiday, private medical insurance and dental care, non-contributory pension worth 50% of final salary, executive share option scheme, profit related pay and a company car changed every two years, say a 5 series BMW?"

The student is stunned by this, but eventually says "You are joking, aren't you?"

At this the interviewer smiles and says "Of course I am, but you started it!"



Graduation December 2016

Congratulations to Samantha Husbands!

For successfully defending her PhD thesis at viva and being set **no corrections**. Sam's thesis title was: "A qualitative analysis of the model building process". Sam was supervised by Jo Coast (Bristol), Sue Jowett and Pelham Barton.



Student Profile: Joel Glynn

Graduate Health Economist, Bristol City Council

Joel joined the MSc in Health Economics and Econometrics after graduating with a degree in Economics from the University of Sheffield and was one of three students to join the MSc in 2015 with a NIHR funded studentship. HEUnews asked Joel:

Why health economics?

Having studied health economics as a module in the final year of my undergraduate degree, I felt that moving into health economics would allow me to use my skills to make a difference to people's lives.

What did you enjoy most about the MSc?

I enjoyed being a part of relatively small classes and the interaction and discussion that this allowed within lectures. Being able to apply concepts and ideas to practical examples and discuss this with peers was really valuable.

What was your dissertation topic?

The aim of my dissertation was to use econometric techniques to investigate whether GP characteristics had an impact on the prescribing of statins.

How has the MSc helped you in your current role?

I started working in the area of public health, as a graduate health economist at Bristol City Council in October 2016. I am part of the Knowledge and Intelligence Team; my role is to help develop evidence for local commissioners. The MSc provided me with the skills and confidence to interpret, critically appraise and present evidence from economic evaluations to decision-makers. It has also helped me to develop training in health economics for commissioners in public health/The NHS, so that they can be more aware of the importance of health economics and begin to use health economic evidence.

Selected recent publications

Al-Janabi H, Van Exel J, Brouwer W, Coast J. A framework for incorporating family health spillovers in economic evaluation. *Medical Decision Making* 2016. DOI:10.1177/0272989X15605094

Andronis L, Barton P. Adjusting estimates of the expected value of information for implementation: theoretical framework and practical application. *Medical Decision Making* 2016. DOI:10.1177/0272989X15614814

Li Bai, Liu WJ, Cheng KK, Pallan MJ, Hemming K, **Frew E**, Lin R, Liu W, Adab P, Development of the theory-based Chinese primary school children physical activity and dietary behaviour changes intervention (CHIRPY DRAGON): development of a cluster randomised controlled trial. *The Lancet* 2016. DOI:10.1016/S0140-6736(16)31978-X

Diwakar L, Ewan PW, Huber PAJ, Clark AT, Nasser S, Krishna MT. The Impact of National guidelines on Venom Immunotherapy Practice in the UK. *Clinical & Experimental Allergy* 2016. DOI:10.1111/cea.12728

Frew E, Economic evaluation of childhood obesity: reflections and suggestions. *Pharmacoeconomics* 2016. DOI:10.1007/s40273-016-0398-8

Ghebrehewet S, Thorrington D, Farmer S, Kearney J, Blissett D, **McLeod H, Keenan A.** The economic cost of measles: healthcare, public health and societal costs of the 2012-13 outbreak in Merseyside. *UK Vaccine* 2016. DOI:10.1016/j.vaccine.2016.02.029

Goranitis I, Coast J, Day E, Copello A, Freemantle N, Seddon J, Bennett C, Frew E. Measuring health and broader wellbeing benefits in the context of drug addiction: the psychometric performance of the ICECAP-A and EQ-5D-5L. *Value in Health* 2016. DOI:10.1016/j.jval.2016.04.010

Hykin P, Sivaprasad S, Prevost AT, Vasconcelos J, Murphy C, Kelly J, Brazier JE, **Basarir H** et al. LEAVO: A Multicentre Phase III Double-masked Randomised Controlled Non-Inferiority Trial comparing the clinical and cost effectiveness of intravitreal therapy with ranibizumab (Lucentis) vs aflibercept (Eylea) vs bevacizumab (Avastin) for Macular Oedema (MO) due to Central Retinal Vein Occlusion (CRVO). *The Lancet* 2016.

Jackson LJ, Roberts TE. Measuring health and quality of life for women undergoing testing and screening for chlamydia: a systematic review. *Sexually Transmitted Diseases* 2016. DOI:10.1097/OLQ.0000000000000407

James N, Pirrie S, Pope A, Barton D, **Andronis L, Goranitis I** et al. Clinical outcomes in patients with castrate-refractory prostate cancer (CRPC) metastatic to bone randomized in the factorial TRAPEZE trial to docetaxel with strontium-89, zoledronic acid, neither, or both. *JAMA Oncology* 2016. DOI:10.1001/jamaoncol.2015.5570

Kigozi J, Jowett S, Lewis M, Barton P, Coast J. Estimating productivity costs using the friction cost approach in practice: a systematic review. *The European Journal of Health Economics* 2016. DOI:10.1007/s10198-014-0652-y.

Roddy E, Jordan K, **Oppong R, Chen Y, Jowett S, Dawes P, Hider SL, Packham J, Stevenson K, Zwierska I, Hay EM.** Re-consultations, self-reported health status, and costs following treatment at a Musculoskeletal Clinical Assessment and Treatment Service (CATS): a twelve-month prospective cohort study. *BMJ Open* 2016. DOI:10.1136/bmjopen-2016-011735